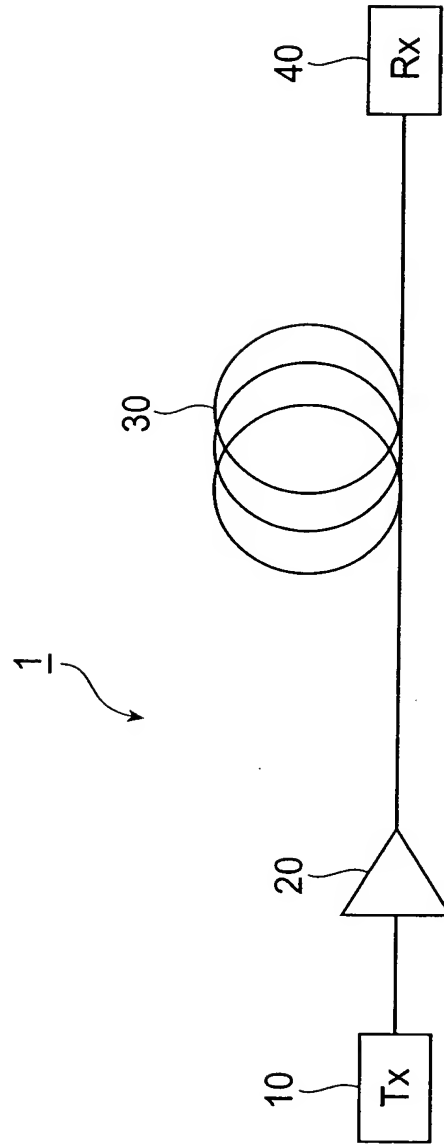


Fig.1



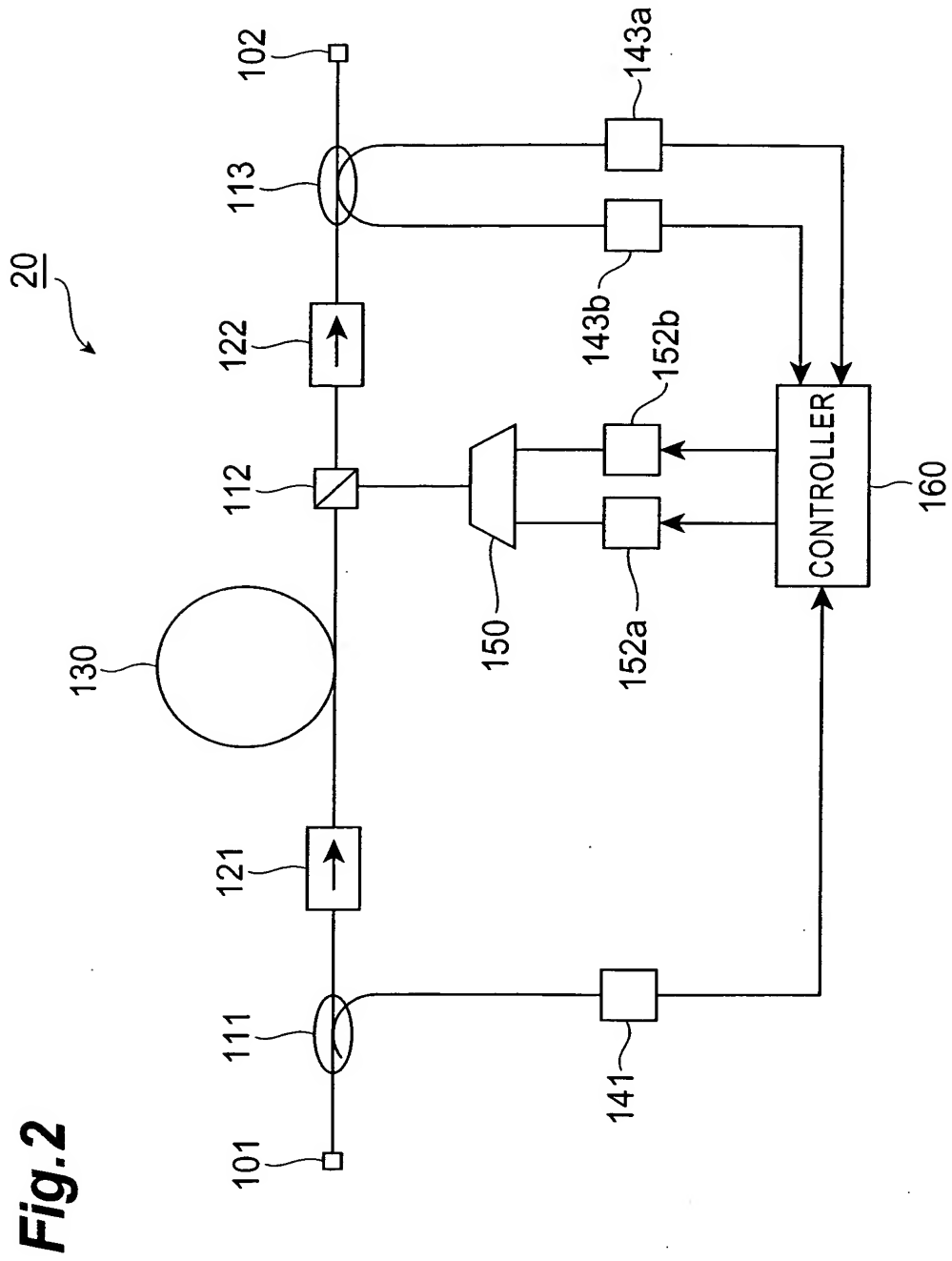
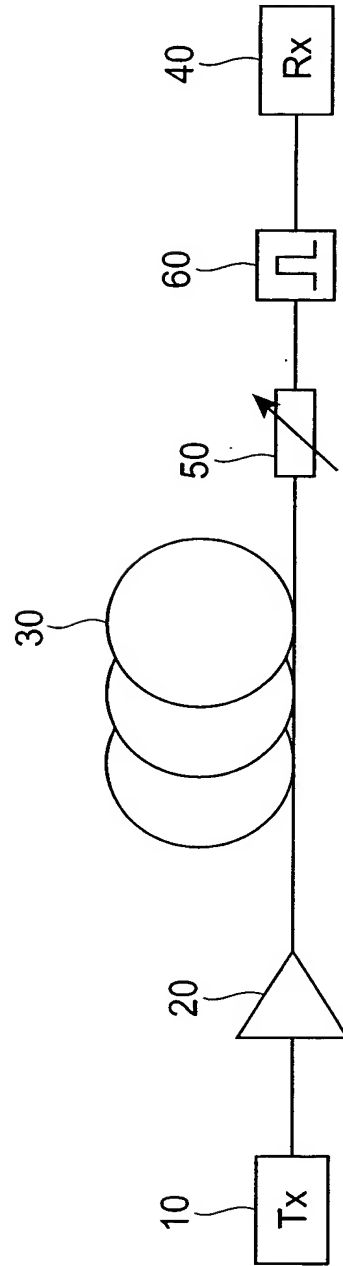


Fig.3



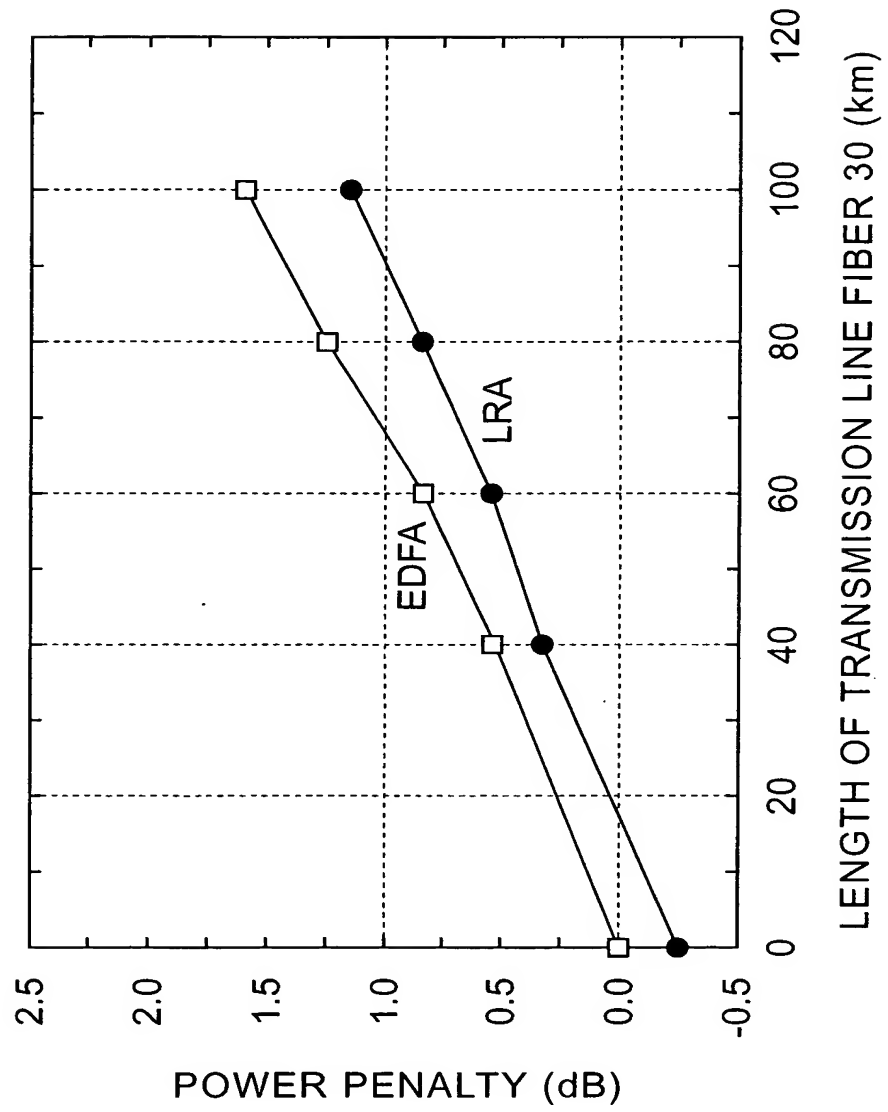
**Fig.4**

Fig.5

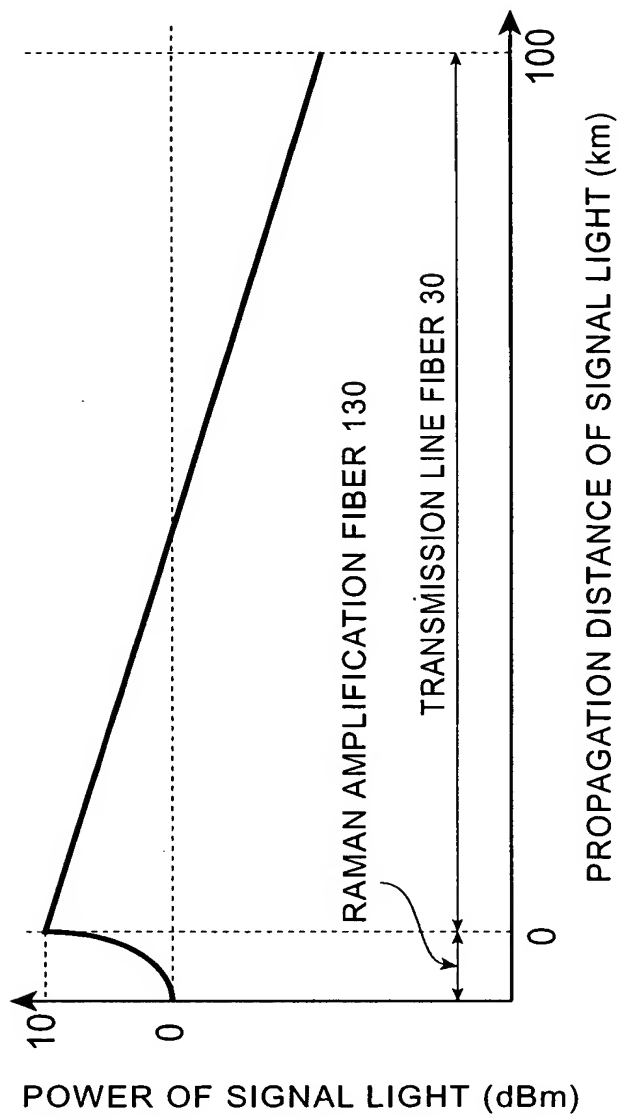
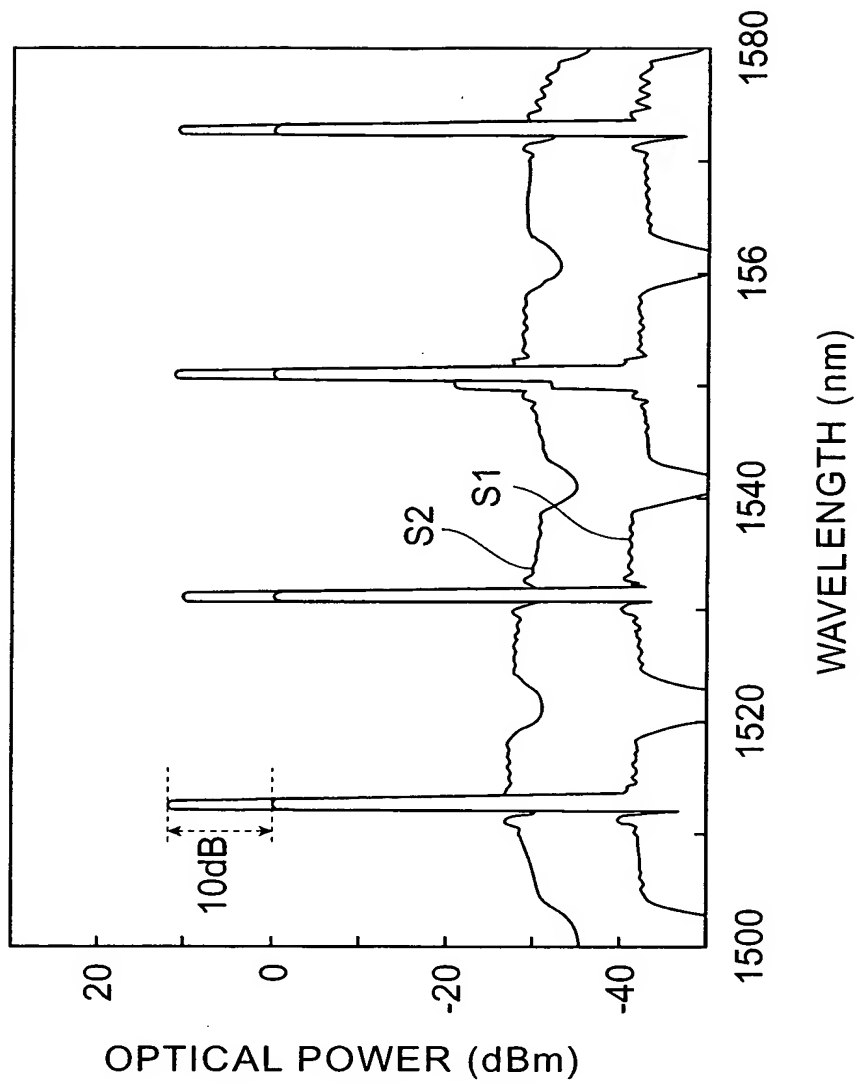


Fig.6

	RAMAN AMPLIFICATION FIBER130	TRANSMISSION LINE FIBER30
NONLINEAR REFRACTIVE INDEX $n_2(\text{m}^2/\text{W})$	5.3	2.9
EFFECTIVE AREA $A_{\text{eff}}(\mu\text{m}^2)$	9	85
FIBER ELNGTH(km)	3	100
TRANSMISSION LOSS(dB/km)	0.53	0.2
PHASE SHIFT AMOUNT $\Phi(\text{rad})$	0.23	0.30
NONLINEAR COEFFICIENT($1/\text{W}/\text{km}$)	23.9	0.34
CHROMATIC DISPERSION(ps/nm/km)	-13.6	16

**Fig.7**

